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Circular economy as fictional expectation to overcome societal addictions. Where do we stand?

Abstract

Circular economy thinking has become the subject of academic enquiry across several disciplines recently. Yet whilst its technical and business angles are more widely discussed, its philosophical underpinnings and socio-economic implications are insufficiently investigated. In this article, we aim to contribute to their understanding by uncovering the circular economy role in shaping a *new vision*, highlighting the social and economic dimensions of future imaginaries and the mechanisms that can enable them to bring about change in the social context. We believe that defining the vision that the circular economy is contributing to shape is key to explain its conceptual framework and activities. Drawing on the concept of *fictional expectations*, we uncover one of the plausible social dimensions inherent to the circular economy thinking thereby opening up a new perspective on the current debate in the circular economy literature wherein authors, by contrast, are emphasising the lack of an explicit social dimension. *Fictional expectations* are introduced to refer to those imaginaries of the future that can catalyse social action in the present and counteract *societal addictions*, in which modern society seems to be trapped. We show how a circular economy inspired vision can be instrumental to the emergence of a fictional expectation that can provide *therapies* to the current *societal addiction* of wasteful production and consumption systems. This philosophical background allows us to provide, in conclusion, a new conceptualisation of the circular economy as a cognitive framework instrumental to the emergence of a future imaginary.

Key words: vision, circular economy, fictional expectations, societal addictions.

Introduction

In *The Image: Knowledge in Life and Society*, an inspirational manifesto paving the way to his future ecological engagement, calling the generation of his time to an awakening, Boulding (1956) affirmed the central role played by the *image* in shaping and directing human action. In *Envisioning a Sustainable World*, Meadows (1996) counselled that any policy process for a more sustainable society cannot do without the establishment of a shared vision. Since then, non-governmental organisations and influential scholars have engaged in the formulation of visions for a more sustainable society. Among them, more recently: *Transforming our World: The 2030 Agenda for Sustainable Development* (UN 2015); *Building a Sustainable and Desirable Economy-in-Society-in-Nature* (Costanza *et al.* 2012); *A Vision for Sustainable Consumption* (WBCSD 2011); *Vision 2050: A new Agenda for Business* (WBCSD 2010); *The Blue Economy* (Pauli 2010); *Prosperity without Growth* (Jackson 2009) and *Natural Capitalism* (Lovins *et al.* 1999).

Yet, despite the relative abundance of proposals, societal discussions and engagement about visions for a more sustainable world are very limited (O'Brien *et al.* 2014). This is not favourable to escape from the concurrent ecological and social crises (Kenis and Lievens 2015; Martínez-Alier *et al.* 2010). Unless an alternative *vision* for a sustainable society consistent with the changing conditions we live in is built, we cannot turn towards a different trajectory (Costanza *et al.* 2012) and we cannot escape from ‘societal addictions’, situations whereby societies get stuck in behaviours that, though rewarding in the short term, are unsustainable in the long term (Costanza *et al.* 2017).

The question concerning the level (individual firm, community, national, supranational) at which envisioning is necessary must be addressed first though. Since more sustainable development cannot be achieved without the contribution of production and consumption systems, and within these, of corporations (Jonkute and Staniskis 2016; Roy and Singh 2017), it is at the level of production and consumption systems that this article concentrates. A production and consumption system (PCS) ‘encompasses all activities transforming energy and basic resources into a particular good or service, distributing it to users, its use and (in some cases) its eventual management as waste’ (Dewick and Foster 2018, p. 161). For their significant ecological impact (Dubey *et al.* 2016), due to prevailing linear pattern of materials flow (Boons and Wagner 2009), PCSs have gone under huge scrutiny and proposals to address their shortcomings have been proliferating (Boons and Wagner 2009; Geels 2015;

Hobson *et al.* 2018), with no agreement on what the best course of action is. ‘Reformist’ agendas are arguing for firms and consumers engaging in more resource efficient behaviours; ‘revolutionary’ positions, on the other hand, advocate more radical shifts including the rejection of the market-based economy and consumerism in favour of frugality and sufficiency (Geels 2015). Although they have received a great deal of attention, the unsustainability of current PCSs is uncontested (Köhler *et al.* 2019) and proposals to enhance their ecological performances are proving inadequate. Geels (2015) laments that ‘reformist policies have, so far, delivered limited sustainability outcomes’ (p. 4), and in the case of ‘revolutionary’ agendas, that ‘there is little empirical evidence that [they] (...) would lead to a significantly more sustainable (or necessarily happier) society’ (p. 5). Therefore, a vision for more sustainable PCSs that is workable and scalable is urgently needed. But what should such a vision look like?

The circular economy (CE hereafter) – regarded as a paradigm shift (Larsson 2018) with the potential to radically transform the operating logic of current economic systems and, within these, of PCSs – has recently become the subject of several national and supranational policies aimed at steering the transition to a more resource-efficient and low carbon industrial economy (Busch *et al.* 2018; Prendeville *et al.* 2018). CE thinking – according to which resources value can be maximised through end-of-life materials recovery strategies, enhanced product longevity, materials purity and circulation across value chains (EMF 2015; Sarasini and Linder 2018) – presents the positive vision that pressure on finite natural resources can be reduced whilst benefits for companies, end users and the whole economy are accrued, as for example mitigation of supply and materials price volatility and rising unemployment (Jones and Comfort 2017; Kalmykova *et al.* 2018; Ilic *et al.* 2018).

Some authors as Temesgen *et al.* (2019) have pointed that CE often neglects the ‘deep ontological and epistemological questions we need to answer if we are to address the complex and interrelated environmental, economic and social problems we face today’ (p. 1), and the CE ‘must engage with the ontological, epistemological and axiological foundations of mainstream economics’ (p. 1). Others, as Heikkurinen *et al.* (2019) have claimed that a ‘more holistic and processual view of organisations’ (p. 1) is needed to overcome the diseases caused by productivism, which ‘fits poorly with circular economy and sustainability’ (p. 1). These are serious challenges that CE scholars must tackle to assess the contribution and impact of the CE and they require conceptualising the CE from a teleological point of view,

i.e., focusing on the *vision* that enlivens the CE, with the categories provided by social philosophy and epistemology.

We purport to show that by articulating a rhetorical, symbolic and cognitive framework, CE is instrumental to the spreading of a new vision of integral human betterment, which has an inherent social dimension. Moreover, by investigating CE at the level of production and consumption systems, we can analyse to what extent CE is contributing to provide a therapy to some social diseases.

Scholars across different academic disciplines (e.g., industrial ecology, ecological economics, business and management) have engaged with the CE concept and explored very diverse lines of enquiry. The definition of the CE, its relationship with sustainable development and its ‘technical’ side (e.g., indicators of materials circularity, implications for business model innovation and supply chain management, environmental benefits) have attracted a great deal of scholarly interest. However, its socio-economic implications are insufficiently investigated (Hobson and Lynch 2016; Llorent-González and Vence 2019) and we aim to contribute to their understanding by uncovering the CE role in shaping a new vision, highlighting the social and economic dimensions of future imaginaries and the mechanisms that can enable them to bring about change in the social context. We ask: *can the CE be instrumental to the emergence of a credible and persuasive imaginary of more environmentally sustainable PCs? Can the CE be operationalised as a potential therapy to societal addictions?*

To answer our first research question, we apply theoretical lenses grounded in imaginaries and expectations and integrate them with concepts drawn from economic sociology and social philosophy. By doing so we contribute to the CE literature, wherein little is known about the potential of the CE imaginary in guiding the process of innovation for sustainability and the dynamics through which that imaginary is translated into action (Farné Fratini *et al.* 2019; Narayan and Tidström 2019). Our line of enquiry links with recent developments in the sustainability-oriented innovation systems literature highlighting the importance of non-technological dimensions such as norms, values and practices to achieve systemic transformation towards sustainability (Schlaile *et al.* 2017).

Our argument builds on recent economic sociology and social philosophy literature. Particularly, on the concepts of (a) ‘fictional expectations’, a shared imagined future differing

from an extrapolation of the present that fosters involvement and investment in a new trajectory (Beckert 2016a; 2013), and (b) ‘societal addictions’ (Costanza *et al.* 2017).

We begin by presenting the features of the CE thinking, which is needed to outline the potential of the CE vision to positively transform the sustainability of current PCSs. As also the most recent scholarship in sociological and philosophical literature has shown, visions, if consistently and robustly shaped, are endowed with productive power and can shape society. Then we analyse the social function of imaginaries of the future, their cognitive and communicative aspect and how they acquire social recognition. Subsequently, we show the potential of the CE model to overcome ‘societal addictions’ as being aligned with Costanza *et al.*’s (2017) proposal to apply individual therapies (Motivation Interviewing) to the entire community (Community Scenario Planning) in order to tackle societal addictions that trap societies into destructive behaviour. We conclude summarising this article contribution, its limitations as well as suggesting future research lines.

The Circular Economy

It is 50 years since Boulding (1966) anticipated in ‘*The Economics of the Coming Spaceship Earth*’ the necessity, given finite resources, of moving towards an economic system with a cyclical rather than linear pattern of materials use. Undoubtedly, Boulding’s *Spaceship Economy* is one of ‘the first clear and still prime examples of sustainability economics’ (van den Bergh 2010, p. 2051) and within this of PCSs functioning in accordance with ecological limits. Subsequently, Georgescu-Roegen (1971) highlighted the need to reformulate economic models in the light of the physical laws of thermodynamics considering the economy as a subsystem of the natural system, and Daly (1973, 1977, 1991) in the ‘steady-state economy’ discussed the consequences of the *Spaceship Economy* postulating that the Earth cannot grow infinitely and thus that a steady state is needed. Discussion regarding a cyclical pattern of materials use has remained mostly academic for very long though (de Jesus and Mendonça 2018) and it is only very recently (from 2012 onwards) that it has gained exposure to a much wider community under the nomenclature of “circular economy” (Jabbour *et al.* 2019; Schroeder *et al.* 2019).

The CE espouses the view of an economic system that is reintegrated within ecology and the case for a transformed industrial model mirroring the cyclical functioning of the ecosystem, where the concept of materials waste does not exist (Elia *et al.* 2017; EMF *et al.*

2015). ‘Built increasingly on renewables, and the endless flow of energy from the sun (energy in surplus), a circular economy is one which transforms materials into useful goods and services (waste ↔ food). It builds capital and maintains it’ (Webster 2013a, p. 542).

The recent diffusion of the CE thinking is largely a consequence of its dissemination by the Ellen MacArthur Foundation (Goyal *et al.* 2016), a British third sector organisation established in 2010 with a mission to ‘accelerate the transition to a circular economy’. Since its establishment, it has been very active in promoting CE thinking with the publication of several reports and books, the creation of CE stakeholders networks and the promotion of initiatives to bring the concept to scale (Goyal *et al.* 2016; Lazarevic and Valve 2017). One of its first major steps was to publish, in conjunction with McKinsey & Company and the World Economic Forum, a three-volume report *Towards a Circular Economy* (EMF and McKinsey 2012, 2013; WEF *et al.* 2014). By providing estimations of the potential economic, social and ecological benefits, along with practical examples for its implementation, the reports successfully developed a widespread interest in the CE amongst policy makers, the business community, academics and others. Lazarevic and Valve (2017) argue that the Ellen MacArthur Foundation (EMF hereafter) is ‘the only actor to present a complete guiding vision for the circular economy, while the role of others is just to reproduce and spread this meme and to imitate each other’ (p. 66). This is highlighted in Hopkinson and Harvey (2019) who have investigated how the EMF has led to a major shift in thinking concerning global resource use and management, namely from a linear to a CE, and what business leaders can learn from it to accelerate the transition to a CE. Waddock in a series of contributions (2015, 2016, 2019) has stressed the role of leaders as shamans in “shaping the shift” towards a more sustainable world. This can only be achieved if leaders can develop new memes, that ‘resonate across different peoples and groups’ (Waddock 2019, p. 931). As cultural artefacts, memes form the basis of cultural narratives, shaping values, norms and behaviours. Therefore, Waddock claims that new memes are ‘essential to shift the mindset of major players in today’s systems’ (Waddock 2016, p. 97). These cultural frames – as pointed out by Beckert (2016, p. 88) – are one component of the social dimension of fictional expectations, another component of which, its cognitive dimension, we will discuss in this article. Indeed, a new vision needs also to be “credible” to orient decisions, by offering socially shared images of a desired future and the causal relation between current actions and the aimed vision.

The success of the EMF in gaining an audience at this juncture might be plausibly explained by the Foundation’s efforts in delineating the economic rationale of the CE

(Webster 2013b) and by certain favourable system conditions. For one, commodity prices and price volatility rose at an exceptional rate between 2000 and 2010 (EMF and McKinsey 2012), and so the business case of increased resource efficiency and waste reduction was becoming clearly enticing (Ranta *et al.* 2018). An estimated \$4.5 trillion of potential value from a CE (Lacy and Rutqvist 2015) has been successful in stimulating engagement from different quarters.

CE thinking synthesises concepts and ideas in several disciplines (Pollard *et al.* 2016) as outlined also by other scholars (see for instance, Prendeville *et al.* 2018). Circular product design and production are amongst the key enablers of the model (EMF 2015; Esposito *et al.* 2018). With the aim to prevent and reduce waste, ‘technical materials’, i.e., synthetic materials that do not decompose or could result in contamination, are kept in use for as long as possible in subsequent production processes through different end-of-life strategies (maintenance, reuse, refurbish, remanufacturing, recycling) (EMF 2015). By contrast, biological materials are returned to nature to build and restore natural capital when reuse across different applications is no longer viable (*ibid.*). For products incorporating circular features, innovative business models, wherein product ownership is replaced by access, are then fundamental for enticing customers and for the implementation of end-of-life materials recovery strategies (Franco 2017; Leising *et al.* 2018; Nußholz 2017). Business models are the means by which economic value can be created and captured within a system (Osterwalder *et al.* 2005; Richardson 2008) and by giving prominence to firm agency through business model innovation (Hopkinson *et al.* 2016; Lonca *et al.* 2018), CE thinking addresses how actors might be encouraged into a cyclical pattern of materials use. Clearly, this is one of its merits. If the flow of materials and energy to achieve a sustainable industrial metabolism are to be adequately redirected, then greater industry participation is necessary (Wells and Nieuwenhuis 2018).

‘A circular business model is how a company creates, captures, and delivers value with the value creation logic designed to improve resource efficiency through contributing to extending useful life of products and parts (e.g., through long-life design, repair and remanufacturing) and closing material loops’ (Nußholz 2017, p. 12). Within the corporate arena, a number of pioneer innovators are implementing business models based on CE principles (Lacy and Rutqvist 2015; Ritala *et al.* 2018). *Aquafil* manufactures nylon yarn from post-industrial and post-consumer waste (EMF 2017a). *Riversimple*, a start-up company, will offer a hydrogen powered car called *Rasa* solely on a service contract basis

from 2019. For a monthly fee, customers purchase car mobility, all fuel, insurance and maintenance costs covered (*ibid.*). For several decades, *Renault* has recovered engines, water pumps and gear boxes and remanufactured them. By doing so, they have achieved reductions of 80% for energy, 88% for water and 77% for waste (WEF *et al.* 2014), and captured value for themselves through reduced costs. *Kaer*, a Singapore-based company, offers air-con as a service. In this way, it takes responsibility for the design, installation, and effective running of the air-conditioning system. It also optimises how the system runs because of Internet of Things data sensing and analytics. As a result, clients benefit from lower energy consumption (up to 70%) and operating costs (by 10 - 20%). Buildings carbon emissions are reduced and *Kaer* enjoys better customers' relationships (EMF 2018a).

Discussed mainly in the practitioners' literature in its early days, the CE thinking is now attracting the attention of the academic community which is advancing the concept through critical interrogation. Currently, the CE is viewed as: (i) 'a transformational agenda that aims to redesign global production and consumption systems' (Preston 2012, p. 18) and as 'a promising concept for sustainable development' (Kirchherr *et al.* 2018, p. 271).

For the CE movement to transform society, it needs to be embedded in a coherent framework or *vision* that catalyses community's action towards the desired goals of more environmentally sustainable PCSs. In this respect, in the next section, we show how and when imaginaries of the future can act as catalysers for social change by referring to the most recent sociological and philosophical literature on the role of imaginaries in society.

Imagination and its Productive Power in Society: The Role of Image, Vision and Fictional Expectations

Analysing the role of the image in shaping individual and social action, Boulding (1956) said: 'the first proposition of this work, therefore, is that behaviour depends on the image' (p. 6). No action at the individual or collective level can be envisaged absent an image of a future state of the world that is seen as an improvement from the agent's perspective. Indeed, according to Boulding, it is the 'image that largely governs my behaviour' (p. 6).

At the same time, Boulding also stressed the social dimension of the image that through symbols and face-to-face communication conveys meaningful patterns of behaviours that define the identity of a group or community. According to the author, 'the basic bond of any

society, culture, subculture and organisation is a ‘public image’, that is an image the essential characteristics of which are shared by the individuals participating in the group’ (p. 64). Thus image and rhetoric, i.e., the use of language through which the image is communicated, constitute the intersubjective domain that allows a society defining itself by a self-identification in a common enterprise; as Boulding put it: ‘every public image begins in the mind of some single individual and only becomes public as it is transmitted and shared’ (p. 64). Despite the potential manipulability of images and their being possible source of misunderstandings, as pointed out by Kesting (2017), Boulding’s ‘impetus is on demonstrating the decision enhancing potential of his concept of the image’ (p. 40). We think that this *impetus*, which is required to generate change at the social level, must be coupled with a *credible* and *shared* imaginary.

It is worth remarking that imagination, with its projection into the future, accomplishes the role of anticipating in the present a possible future. That expectations play a vital role in directing human action should therefore not come as a surprise to an academic audience, and in economics Ludwig von Mises (1949) has analysed the teleological aspect of action that is only possible under the expectations not only of a new and different state of the world, but of a *better* one. However, recently, Beckert (2016a) has pointed to the *fictional* character of expectations in shaping the dynamics of modern capitalism, enforcing forward looking orientations of economic agents. He characterises the fictionality of expectations at the ontological and epistemological level: ontologically, because outcomes are uncertain, and epistemologically, because interpretations are contingent or open to change. Thus, ends are not seen as independent from action and outside the action process, but the latter must be interpreted as a ‘progression in which ends and strategies are formed and revised based on contingent and changing interpretations’ (Beckert 2013, p. 223). Fictional expectations thus refer to imaginaries of the future but also to the *causal* relations that link current decisions and actions to the desired *vision*, as if these projected future and relation could actually hold.

As a paradigmatic exemplification of the social role of expectations in catalysing social change, Beckert refers to capitalism interpreted as a socio-economic configuration. ‘Capitalism is a socioeconomic system oriented toward the future’ (Beckert 2016a, p. 269) in which the economic agent is in a continuous search for new forms of production/products to succeed in a competitive environment. The entrepreneurial initiative of the economic agent, who despite the high degree of uncertainty about the future forms some expectations which will inform the agent’s rational decision making, is therefore crucial to understand the

dynamics of the market-based economy (Beckert 2016a). Under the rational expectations theory, individuals use optimally all available information that leads them to elaborate their rational expectations (Beckert 2013). This approach is contested by sociological approaches to decision making which, on the other hand, postulate that agents' perception of the reality is influenced by the structure of the society (culture, norms, institutions) and so are their choices with regard to the future (*ibid.*).

To the rational choice theory of expectations Beckert (2016a; 2013) opposes a different, *fictional*, approach suggesting that under conditions of uncertainty, whereby it is unlikely that actors possess all necessary information and interpret them properly, what drives economic actions are 'fictional expectations', a shared imagined future differing from an extrapolation of the present, that fosters involvement and investment in a new trajectory. Fictional expectations differ from sheer phantasy and, if regarded as credible, they support economic decision making and thus economic outcomes (Beckert 2016a). Arguably, any decision pertinent to a market-based economy, e.g., investments, consumption, innovation, would not take place in the absence of expected future scenarios (*ibid.*). In the context of his analysis of 'fictional expectations', Beckert (2016b) stresses the crucial role played by economic models and paradigms as '*instruments* for the creation of fictional expectations' (p. 44), since paradigms 'provide interpretive frameworks' (p. 44) that allow agents to envision a different future. Since our aim in the present article is not to follow and assess Beckert's claims with regard to the capitalist system, but to investigate to what extent the CE movement can be instrumental to a renewed *imagined future* with the potential to catalyse societal change and help overcome societal addictions, we need to focus on the rhetorical, symbolic, cognitive and social dimension of fictional expectations to show how a CE inspired vision can provide therapies to current societal diseases.

Rhetorical, Symbolic and Cognitive Dimensions of the Spreading and Success of Fictional Expectations

The social dimension of fictional expectations is due to their being influenced by collective beliefs and communicative practices, which point to the *rhetorical* character of fictions. As McCloskey has observed in *Metaphors Economists Live By* (1995), 'all conversations are rhetorical, none can claim to be the Archimedean point from which others can be levered once and for all' (p. 222). And more importantly, rhetoric and communication, what

McCloskey calls “sweet talk”, has been responsible for the massive development that humanity has experienced since the XIX century, which she has termed the Great Enrichment, with an increase in material goods by a factor of 10 to 30 (McCloskey 2016). But the word “Enrichment” in the McCloskeyan use also indicates the ‘spiritual growth’ (p. 25), as e.g., the social recognition of men’s and women’s dignity. It was not capital accumulation, power, institutions, and other material aspects that caused the unprecedented development in human history in the last two centuries, involving not only economic growth, but “ideas”, i.e., ‘the liberal plan of equality, liberty and justice’ (Smith 1776, p. 664) and, equally important, “rhetoric”, i.e., the capacity to communicate and spread ideas. Indeed, as McCloskey documents it was a ‘change in rhetoric [that] made modernity, and can spread it’ (p. 640). This rhetorical dimension of fictional expectations is what allows social actors entering an open and broad conversation and sharing a common vision of the future, which in Costanza *et al.* (2017) terminology, which we discuss in section 4, would correspond to *engaging* and *focusing*, respectively.

To produce social change, it is essential to ‘identify motivations for positive change’ (*evoking*) (Costanza *et al.* 2017, p. 546) and this can only be achieved when a positive alternative vision is provided, and participants share its scope and see it as credible (*plausible future*). As in the capitalist dynamics described by Beckert, surviving and thriving in a competitive environment requires consumers to ascribe *symbolic* value to goods being owned and producers ‘to seek new products, higher productivity, lower costs, new forms of production, investment and innovation’ (Beckert 2016a, p. 269). In a CE vision it should be stressed that the “survival” and the development have a larger and more integral dimension, so that the building blocks of the capitalist dynamics, innovation, investment, money and consumption, instead of being rejected are integrated in a more comprehensive vision that considers human activity and exchange within a wider ecosystem. This would be so, especially, if, following Murray *et al.* (2017)’s proposal, the CE vision is seen as an economic model wherein economic activity is designed and managed ‘to maximize ecosystem functioning and human well-being’ (Murray *et al.* 2017, p. 377). We notice only that the social dimension, which Murray *et al.* see as missing in the CE, is inherent to the rhetorical, symbolic and cognitive dimension of fictional expectations which the CE model is contributing to shape, as we show in the next paragraph, where we also indicate that in order to be effective, a vision must embed the notion of “human betterment” as pioneered by Boulding (1971).

Regarding the *cognitive* dimension, fictional expectations can bring about a change in the economy to the extent that the imagined outcome of an individual's choice *evokes* an 'enjoyment by anticipation' (Shackle 1979, p. 45). But to experience this sensation one must have fully committed oneself to the imaginaries embodied in the fictional expectation. This commitment allows social actors to overcome the inevitable uncertainty related to their action and barriers to change. For the success of fictional expectations, it is essential that they be credible: a rational explanation of the causal link between current practices and envisaged imaginaries of the future must be provided and the future must be possible; it must not be an act of phantasy to which few would commit. Innovation begins with the 'imagined deemed possible' (Shackle 1979, p. 26). In Costanza *et al.* (2017) terminology, this would correspond to *evoking* and *planning* to the extent that the latter is meant to provide a plausible and credible scenario.

In the next paragraph, we show the inherent social dimension of fictional expectations, as the philosophical and sociological literature have emphasised, and how these fictional expectations can be effective to the extent that they rely on a clear vision of the ultimate good to be pursued. Then we explain why seeing the CE within an ecological vision can provide those evocative and shared dimensions that are required to overcome societal addictions.

Social Dimension of Fictional Expectations

In 1979, the French philosopher Paul Ricoeur wrote an article entitled "The function of fiction in shaping reality", criticising the idea of fiction as a reproduction of reality and stressing instead the productive dimension of fiction, by uncovering new dimensions of reality. Here Ricoeur makes a crucial distinction between *absence* and *unreality*. Whereas the latter exists nowhere, i.e., its referent is non-existent, the former concerns 'the mode of givenness of a real thing' (p. 126). This means that fictions do not take reality as "already given", i.e., in a reproductive way, but "they refer in a 'productive way' to reality as intimated by the fiction". Even more clearly, Ricoeur says that when we abandon the merely reproductive function of fiction, we come to acknowledge that 'fiction changes reality, in the sense that it both 'invents' and 'discovers' it' (p. 127).

It is in this sense that fiction increases reality, not because it brings about new objects as referents, but because it provides an 'expanded vision of reality' (p. 128). A vision evokes a possible and better future scenario which, though based on a counterfactual world, must be

credible. This credibility however, as Searle (1975) pointed out, must rely not in the literary meaning of the single words being used but in acting “*as if*” the proposed image were real, where action here involves both the speaker and the reader.

When fictions are effectively communicated and spread within a social context, they acquire a social dimension since they are both influenced by the community of speakers who convey meaning to them and, in turn, they influence and contribute to build and shape the social reality which is constituted by individual agents. Nonetheless, fictional expectations are subject to a continuous process of revision by participants to the communicative dialogue and open to adaptation, when circumstances change or new and more convincing arguments are put forward; if it were not so, the dialogue would not have been real, but purely imaginary, that is it would not make an impact on the collective imaginary being pursued. Thus, fictional expectations are characterised less by their stability than by their inherent fragility, but this fragility can also be viewed as a strength in ensuring that their shared nature is also perceived as such, i.e., as the outcome of a social enterprise, instead of being imposed from above or by an external power. This social interaction to shape the future is characterised inevitably by a degree of uncertainty, but as noticed by Grunwald, ‘uncertainties represent the other side of the coin to the openness of the future and of our options for shaping it’ (Grunwald 2007, p. 246). This should not prevent engagement by social actors, because it is inherent to the shared dimension of social knowledge that is at work to shape the normative content of the fictional expectation or the ‘Leitbild’ in Grunwald’s perspective.

The construction of a credible and shared vision can be related to the tripartition of knowledge employed by sustainability scholars. While *systems knowledge* is related to a ‘descriptive understanding of social and ecological system functioning [...]’. *Normative knowledge* relates to judgements of how a system ought to be. [...]. Finally, *transformative knowledge* is needed to develop tangible strategies to manage ecosystems [...] towards the societal goals’ (Abson *et al.* 2014, p. 32). The involvement of multiple actors in determining normative goals (targets) that define a coherent vision is felt as missing in the literature by Abson *et al.* (2014, p. 35). If a transition to a more sustainable ecosystem is deemed desirable, it cannot rest on purely descriptive terms, but must explicitly acknowledge its normative goals. The authors correctly acknowledge that there is not a “single accepted normative framework”, but there should be an explicit reference to the normative basis of descriptive (systems) knowledge. As we argue below, this should be embedded in a broader

societal goal of human betterment which would provide a normative foundation for both the *transformative* strategies that are being implemented at the level of production and consumption systems and the *systems* knowledge that is produced by scholars and institutions to enhance our understanding of the functioning of the social and ecological system.

If the fictional expectation of a “sustainable” world is to serve as a driver for action at the present, it must be able to envisage a future that would not miss the conquests of modernity in terms of material and spiritual growth and should long for a more integral development of human beings within the ecosystem. Can the CE model be instrumental to this fictional expectation? Beckert (2016a) discusses the role played by economic theories, models and forecasts as instruments that help agents yield fictional expectations ‘by providing accounts of causal relations with which actors form a cognitive map for predicting the future consequences of present decisions’ (p. 17). In other words, these instruments provide guidance to present action in an uncertain world *as if* the same could effectively lead to the desired outcome.

To be effective, this fictional expectation must inform institutions and corporations, academies and research centres in a collective effort guided by a vision of betterment that looks at the integral development of human capabilities (see Sen 1984 and Nussbaum 2011). Again, Boulding (1971; 1984; 1985; 1992) with his notion of “human betterment” was pioneering in grasping that without a clear vision of “Goodness”, i.e., the ultimate good to be pursued, all intermediate steps cannot be assessed and we cannot evaluate whether a human system is better than the previous one. This vision of integral human betterment has the power of *evoking* a positive alternative scenario that can help our society escape the current “societal addictions”.

In the next section, by investigating the concept of ‘societal addictions’, ‘social traps’, and their therapies as discussed by Costanza *et al.* (2017), we show how interpreting the CE as instrumental to the emergence of a credible and persuasive imaginary of more environmentally sustainable PCSs, can overcome those addictions by providing therapies that are in line with Costanza *et al.*’s argument.

Societal Addictions and Their Therapies

Economists and ecological economists, as Arthur (1998) and Costanza (1987) respectively, have since long time pointed to the harmful social effects of path dependence, social traps and societal addictions whereby the pursuit of short-term benefits may cause long-term detrimental effects. The problem is well-known to psychotherapists at the individuals' level, concerning drug or alcohol addiction, and is being treated with *Motivational Interviewing* therapies. Indeed, psychotherapists have shown that when individuals' addictions (e.g., drug use) are treated with confrontational approaches, i.e., addicts are confronted with their own unhealthy behaviour and its consequences for themselves and others, this is very unlikely to be sufficient to produce positive change.

By drawing an analogy between individuals' addictions (e.g., drug use) and societal addictions (e.g., overconsumption), Costanza *et al.* (2017) notice that a confrontational approach is very often used to stimulate change at the societal level in relation to environmental and societal issues as overconsumption, climate change, inequality etc.. Unfortunately, this has not led to much progress towards the solution of these broader societal sustainability challenges and thus a diverse way of framing and debating these challenges is welcomed (*ibid.*). Hence, Costanza *et al.* (2017) propose to transpose to the level of the entire community the individual therapies elaborated by psychotherapists yielding what they name *Community Scenario Planning*.

Using the key features of *Motivational Interviewing*, the most effective method that therapists use to cope with individuals' addictions, Costanza *et al.* (2017) elaborate a set of principles that could be used to deal more effectively with societal addictions. Accordingly, what produces change is 'to engage society in positive change talk in empathic and supportive ways, focus on shared goals, evoke and motivate positive change, and plan effective pathways to change' (p. 545). In terms of principles, this approach is based on the following: (a) *engaging* (creating stakeholders' networks involved in conversation about change); (b) *focusing* (establishing common goals among these stakeholders); (c) *evoking* (assisting stakeholders in identifying motivations for positive change), and (d) *planning* (supporting stakeholders in progressing from goals to real change). While the authors present the model of *Community Scenario Planning* to illustrate how the proposed approach could be implemented, they do not exclude that other approaches are also possible.

From the four 'social therapies' indicated by Costanza *et al.* (2017), it emerges clearly that for therapies to be effective actors should be engaged in empathic conversation (as

opposed to confrontational attitudes), which involves the community at large to build a shared vision (as opposed to top down goals imposition), based on positive goals (as opposed to fear of negative consequences of current behaviour), that are plausible, i.e., can realistically be attained (as opposed to mere dreams of a better future). All these ingredients are inherent to fictional expectations (or vision) as discussed above in section 3 and we maintain that the CE movement is being instrumental to the establishment of a renewed vision as we show next.

Indeed, the CE rhetoric and initiatives (as ‘therapists’) can be effective in treating the ‘societal addiction’ of wasteful, linear industrial models since they embrace all the principles (engaging, focusing, evoking and planning) that have been delineated above to stimulate positive behavioural change, as we explain in more detail in the next paragraph.

Societal Addictions and a Circular Economy Inspired Vision

In this section we present the steps already undertaken by the CE movement to stimulate commitment towards its implementation and we match these steps with the four therapeutical principles discussed by Costanza *et al.* (2017) to tackle societal addictions.

Using a more inclusive value creation rhetoric, which also acknowledges nature and society, and by putting forward an idea of an economy that is ‘restorative and regenerative by intention and design’ (EMF and McKinsey 2012, p. 7) and in line with the functioning of the ecosystem in which it is embedded (Webster 2013a), CE thinking has been very successful in stimulating *engagement* across different levels: ‘the growth of interest in the circular economy has been meteoric with new initiatives emerging weekly’ (Hopkinson and Harvey 2019). As a non-disruptive concept but rather ‘a motivational and inspirational compass’ (de Jesus and Mendonça 2018, p. 75) compatible with companies and countries goals and suitable to mitigate environmental and socio-economic crises (*ibid.*), CE thinking has attracted the interest of corporate leaders, policy makers and academic scholars.

Major corporations (e.g., *Unilever, Xerox, Philips, Renault, Desso*) and emerging innovators (e.g., *Mud Jeans, Bundles, Splosh*) are experimenting with the implementation of CE principles in their strategies and business models (Bocken *et al.* 2017a; EMF 2017a) to attain what has been termed as ‘circular advantage’ (Lacy and Rutqvist 2015). Simultaneously, attracted by the economic, social and environmental rationales underpinning

the CE model, policy makers are promoting policies that seek to steer the transition. As documented in De Angelis (2018), upon whose gathering of CE initiatives we are building in this paragraph, many initiatives have taken place in the last years. In what follows, we integrate these initiatives within Costanza *et al.* (2017)'s framework, demonstrating how they are aligned with *engaging, focusing, evoking and planning*. The CE is by law an objective of China's economic development agenda (Murray *et al.* 2017). The EU has also adopted a very ambitious set of measures to promote the uptake of CE principles within its Member States. In fact, the CE is at the basis of the *Europe 2020 Strategy*, the EU's strategy for a more inclusive, sustainable and smarter economy (EC 2011) and of the *Circular Economy Package* (EC 2015a) later replaced by *Closing the Loop-An Action Plan for the Circular Economy* (EC 2015b), establishing binding targets for reducing waste and measures to remove barriers (e.g., devising standards for secondary materials).

More recently, China and the EU, among the largest world economies, signed a *Memorandum of Understanding on Circular Economy Cooperation* at the 20th EU-China Summit in Beijing which can have significant, beneficial consequences for a rapid transition towards the CE at the global scale (EMF 2018b). Globally, higher education institutions, known as *Pioneer* and *Network* universities, collaborate with the EMF to develop learning and share knowledge about the CE (EMF 2018c) and CE research centres are emerging within higher education institutions (e.g., *The Circular Economy Centre at The University of Cambridge; The Circular Economy Lab at The University of Oxford; The Exeter Centre for Circular Economy at The University of Exeter*).

Circular economy stakeholders are *focusing* on the development of both a 'framework for an economy that is restorative and regenerative by design' (EMF 2017b, p. 1) and CE networks. One of these is the *CE 100*, a forum of leading global companies, governments, higher education institutions and SMEs innovating in products, services and BMs, collaborating and networking for the development of practices based on CE principles (EMF 2017c). *Project MainStream* is another example of collaborative network between the EMF, the World Economic Forum and McKinsey & Company, which investigates the enablers of the CE (e.g., digital technologies) and systemic barriers in global material flows that no single business city or government can solve on its own because they are either too big or too complex (EMF 2017d). To date the work of *Project MainStream* has concentrated on i) plastics to identify suitable approaches to reduce the huge negative environmental impact of this material in the light of CE principles, ii) the role of digital technologies in supporting the

transition towards the CE, and iii) organic waste in urban environments to identify opportunities for capturing value in terms of energy, nutrients, and materials through the application of CE principles (*ibid.*).

The engagement of different stakeholders is taking place through a conversation *evoking* the attainment of a more positive relationship between economy and ecology, one that is focusing on reintegration (EMF *et al.* 2015), regeneration and restoration (EMF and McKinsey 2012), on ‘doing the right things’ (eco-effectiveness) (Webster 2013a) and that leverages upon creativity to find specific and concrete solution (*planning*) to the current ecological concerns (Pollard *et al.* 2016). Motivations for positive change to assist CE stakeholders have also been identified. For one, a significant amount of publications, books and reports pointing to the economic, social and ecological rationales for engaging with the CE model, have been produced by the EMF and its partners. Food, mobility and urban systems, plastics, textiles, electronics and toolkits for policy makers are amongst the subjects of these publications (EMF 2018d). For instance, in the food sector, through waste reduction and closed materials loops, the tonnes of synthetic fertilisers going into the agricultural system could be reduced ‘as much as 80%’ (EMF *et al.* 2015, p. 35) by 2050 compared to the current 16 million tonnes used. Analogously, by applying precision irrigation techniques and cutting food waste, water consumption in the European agriculture could be reduced ‘as much as 70%’ (*ibid.*, p. 35) by 2050 compared to the 73 cubic kilometres of water currently used each year.

To ensure that stakeholders are supported in progressing from goals to actions, *planning* is also necessary. For instance, the EMF develops educational content to support courses on the CE (EMF 2017b). In addition, *The New Plastics Economy Initiative* launched at the 2017’s World Economic Forum offers a global action plan to align the plastics industry to CE principles (EMF 2017d) with a set of measures focusing on the areas of design and innovation, reusing and recycling (WEF *et al.* 2017). It has been argued that ‘the action steps put forward are practical ideas that will help bring a new plastics economy from vision to reality’ (WEF *et al.* 2017, p. 8). Again, as shown in De Angelis (2018, p. 25 and p. 85), various initiatives and several actors around the world are committed to support CE implementation. In this vein, *The Circular Fibres Initiative* aims to analyse the current textile industry whilst outlining a potential circular scenario and the steps necessary to achieve it (EMF 2017e). According to Dame Ellen MacArthur, Foundation founder and chair of trustee, ‘the way we produce, use, and reprocess clothing today is inherently wasteful, and current

rising demand increases the negative impacts. The Circular Fibres Initiative aims to catalyse change across the industry by creating an ambitious, fact-based vision for a new global textiles system, underpinned by circular economy principles, that has economic, environmental, and social benefits, and can operate successfully in the long term' (EMF 2017e, p. 1). In the Netherlands, a circular hotspot in 2016, *Circle Economy*, supports business leaders and policy makers with tools and programmes to facilitate implementation of CE corporate and national strategies (Circle Economy 2018). *Circularity Capital*, a private equity firm, assists European small-medium enterprises in the implementation of business models based on CE principles (Circularity Capital 2018). In the UK, *The British Standard Institute*, has recently released the 'BS 8001: 2017 Framework for Implementing the Principles of the Circular Economy in Organisations' which offers a guidance to businesses of any size and sector interested in applying CE principles (BSI 2017). It defines CE terms, principles and concepts whilst containing a description of a management framework for implementing CE strategies and clarifying the many practical aspects surrounding the concept (e.g., economic, legal, design) (Pauliuk 2018).

It is also worth stressing that the increasing literature on the CE in recent years, as witnessed in publications and special issues in major academic journals (e.g., *California Management Review*, *Journal of Cleaner Production*, *Journal of Industrial Ecology*, *Nature*, *Resources, Conservation and Recycling*) and government/non-governmental reports (EC 2011; UNCTAD 2018; WBCSD 2016; WEF *et al.* 2014; WEF *et al.* 2017), shows how the CE is engaged in producing a cognitive framework to lend credibility and plausibility to its proposals. Indeed, as we saw discussing Beckert's (2016a) view of fictional expectations, theories are 'instruments to create expectations' (Beckert 2016a, p. 245) to the extent that they can delineate causal mechanisms and measure the 'suitability of different paths to achieve the suitability of alternative goals' (Beckert 2016a, p. 245).

These principles of *engaging*, *focusing*, *evoking* and *planning* are at the heart of the rhetorical, symbolic and social dimensions of fictional expectations. This corroborates our argument in favour of viewing the CE as an instrument for the emergence of a fictional expectation of more environmentally sustainable PCSs. Indeed, *engaging* in broad and open discussion and *focusing* on shared objectives, which catalyse action around a shared vision, are inseparable from the *rhetorical* dimension of fictional expectations. On the other hand, motivating change by *evoking* a preferred future is inherent to the *symbolic* dimension of fictional expectations. Finally, *planning* for actions and policies that can credibly lead to the

attainment of the preferred goals is embedded in the *cognitive* dimension of models and theories which are instrumental to the establishment of a fictional expectation.

Results and Discussion

Visions for a more sustainable society are crucial to provide direction as leading scholars have rightly argued. As philosopher Martha Nussbaum (2018) has recently argued: ‘people who hope for the future of their country need to have a vision of the goal for which they are striving. But it’s a good idea to have more than a poetic vision’ (p.174). When a society stops envisaging a better future, i.e., an “imagined future” that entices individual and social actors, it gets trapped into the crisis, at the economic and ecological level. However, a vision that catalyses collective effort, and helps to overcome current barriers cannot be only a dream, but should be the outcome of a powerful intellectual effort that involves all social actors.

In this respect, with this article not only have we made an argument for the relevance of visions for progressing towards more environmentally sustainable PCSs, but also we highlighted the socio-economic processes by which visions can be successful in catalysing action towards the desired direction. We have outlined how imaginaries can have a social function and highlighted that the CE can be an instrument for the emergence of a fictional expectation that enhances the ecological sustainability of current PCSs. We have shown that the rhetoric and initiatives that are underlying the CE model can provide a solution to societal addictions as being in line with the processes and principles effective in motivating social agents to escape from socially destructive behaviour as proposed by Costanza *et al.* (2017). As such, the CE could be considered a powerful ‘transition pathway narrative’ to address the multiple sustainability challenges of this time since narratives are not solely stories but they create pathways for change (Luederitz *et al.* 2017).

The journey towards the vision prospected by the CE is far from being complete though (Aldersgate Group 2017; Bocken *et al.* 2017b). CE thinking has entered the business and political domains only recently whilst societal transitions are generally complex and accomplished in the long-term (Geels 2011). As noted by Almudi *et al.* (2017) a sustainability transition occurs when an ‘environmental utopia sufficiently dominates other utopias – or at least, it manages to reach a significant strength in society against competing utopias’ (p. 166). Therefore, only the long-term will cast its verdict on whether the CE creates a fictional expectation for a more environmentally sustainable industrial metabolism.

Systemic and complex changes in consumers' behaviour, education, finance systems, design, business models, infrastructures and regulations are needed to support the transition towards the *vision* prospected by the CE (EMF 2015; Hopkinson *et al.* 2016; Moreno *et al.* 2016; van Buren *et al.* 2016). Although major commodities (energy, metals, agriculture, precious metals, and fertilisers) prices are predicted to remain volatile (World Bank 2019), certain commodities prices (e.g., aluminium, coal, oil, gas, iron ore) have fallen significantly since 2011 compromising the economic sustainability of materials recycling (Howard and Gallaway 2017). Therefore, a tax reform by the means of reducing labour tax and increasing tax on the use of virgin natural resources would help to raise the desirability of materials recycling strategies (Aldersgate Group 2017). This proposal, which could boost more resource efficient business models and employment opportunities (*ibid.*), is at the heart of *The Ex'Tax* (short for Value Extracted Tax) study (2016) endorsed by several organisations including the International Monetary Fund and the Organisation for Economic Cooperation and Development. Market barriers are also in place. Inadequate consumers' awareness of tCE thinking and consequently interest in products incorporating circular features, along with lock-ins in consumers' behaviour especially in fast fashion markets, i.e., clothing and electronics (EASAC 2015; Kirchherr *et al.* 2018), are just some of these. Difficulties in accessing financial resources because of the peculiarities of circular business models are also perceived as potentially disruptive (Kirchherr *et al.* 2018; Roos 2014).

As we have argued in this article, according to us, the merits of the CE model are best understood if they are seen as part of an ongoing societal conversation (*rhetoric*) where actors and all involved stakeholders engage in a continuous and authentic *dialogue* at a multifaceted (social, institutional, political, cultural, academic, educational, etc.) level that envisages the achievement of an *integral human betterment*. In this sense, metaphorically, the *circularity* of the CE indicates its inclusiveness across these different levels, though these *circles*, in analogy with those caused by a stone thrown in the water, should be understood as *concentric*, i.e., open to different perspectives coming from natural and social sciences.

Therefore, drawing on the arguments developed in this article, we conceptualise the CE as follows: the *circular economy* model is a *cognitive framework* instrumental to the emergence of a *credible, shared and persuasive imaginary* of more environmentally, economically and socially sustainable production and consumption systems, by positively *engaging, focusing, evoking and planning* how to achieve an *integral human betterment*.

This view of the CE is in line with those “*transformational strategies*” that are needed to implement ecological sustainability, providing a framework that is ‘*progressive, developmental, and dynamic, as well as positive toward ecosystems, human development, and welfare*’ (Borland *et al.* 2016, p. 305). Engaging with the new vision (CE) can occur if a change in ‘ethos, comprehension and core values’ (Borland *et al.* 2016, *ibid.*) takes place. But this must be sustained by a robust vision of the ultimate goal (telos), which must inform social actors initiatives, if they are not remain sterile initiatives. In this sense, we are contributing to the “teleological paradigm”, whose roots can be traced in the Aristotelian ethics (see Dierksmeier 2016, Ch.3).

We hope that viewing the CE as instrumental to a vision of integral human betterment and showing how a credible vision of the future can orient decision-making and transform society, by engaging in a genuine dialogue with social actors, we have contributed to the “humanistic paradigm” that some business ethics scholars have been calling for (see Dierksmeier 2016, Ch.5, for a general presentation, and Arjoon 2010, for an application to management practice). This humanistic paradigm by merging insights from the teleological (Aristotelian) tradition of the Good as end and the liberal (Kantian) tradition, which acknowledges the plurality of goals to be pursued, seeks to outline a new vision based on the notion of human dignity and devoted to ‘social, moral and ecological sustainability’ (Dierksmeier 2016, p. 103). In particular, after asking what makes “humanistic management” humanistic, Dierksmeier maintains that it rests on a conception of the economy that is based on ‘the personal freedom of each and depends on the responsibility of all. Business is, after all, conducted by people, with people, for people’ (Dierksmeier 2016, p. 28). He then concludes by saying that ‘humanistic management is a conception encompassing moral, social, and ecological sustainability criteria precisely because it sees individual autonomy not just as an entitlement for self-determination but also as an obligation for self-commitment’ (Dierksmeier 2016, p. 28). More recently, Pirson (2019) has renewed the call for a paradigm shift in management theory towards a more humanistic perspective that puts at the centre the notion of human dignity, taking into account the complexity of the interactions stakeholders are involved in.

In this article, by conceptualising the CE as a positive engagement of multiple actors in society to frame a shared imaginary aiming at achieving an integral human betterment, we have shown how the CE vision has catalysed social action by multiple actors (“by people”) and has contributed to the construction of a shared (“with people”) and credible vision of the

future (“for people”). The CE has become a source of inspiration for institutions and firms by encouraging multiple stakeholders to take action towards a common goal. Its rhetorical, cognitive and social dimensions informed by a robust vision of the ultimate goal, which we have discussed in this article, are in line with some of the archetype theorising shifts that Pirson (2019) sees as needed to enact a transition towards a humanistic management, namely a rhetorical dimension and a human dignity centred perspective.

As pointed out by Melé (2003) a humanistic management approach is a “real challenge” for academics and managers, in that it involves creating a community of persons aiming at achieving the common good. This is clearly a broad research agenda within philosophy of management, but one that is worth pursuing, and this article has shown how the CE framework has engaged with the three dimensions of social, moral and ecological sustainability.

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